

VIP X1 to MIC400 PTZ Camera Connection Guide

Bosch Security Systems

EN | Connection Guide



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VIPX 1 to MIC400 Connection Guide

Connection Guide

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Safety Precautions

The following symbols are used throughout this manual please pay careful attention to their meaning.



The lightning flash with an arrowhead symbol within a triangle is intended to alert the user to the presence of non-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within a triangle is intended to alert the user to the presence of important safety, operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Important Safety Instructions



CAUTION
ELECTRIC SHOCK HAZARD TO REDUCE THE RISK OF ELECTRICAL SHOCK, DISCONNECT POWER SUPPLY BEFORE OPENING THE POWER SUPPLY UNIT. POWER DISCONNECT: POWER SUPPLY UNITS HAVE POWER SUPPLIED WHENEVER THE POWER CORD IS INSERTED INTO THE POWER SOURCE



WARNING
INSTALLATION SHOULD BE CARRIED OUT BY QUALIFIED PERSONNEL ONLY IN ACCORDANCE WITH THE APPLICABLE LOCAL CODES. BOSCH SECURITY SYSTEMS ACCEPTS NO LIABILITY FOR ANY DAMAGES OR LOSSES CAUSED DUE TO INCORRECT OR IMPROPER INSTALLATION

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions
2. Keep these instructions
3. Heed all warnings
4. Follow all instructions
5. Install according to manufacturer’s instructions
6. Do not install near any strong heat sources such as furnaces



Intentionally Blank

CHAPTER 1 Introduction

This guide is to assist users with connecting Bosch Security Systems MIC400 range of PTZ cameras to the Bosch VIP X Network Video Server.

The VIP X1/VIP X2 Installation and Operating manual should be referred to for installation and full operating instructions for the VIP X1/VIP X2 Network Video Server and the appropriate MIC400 Installation and Operation manual covers installation and setup of the MIC400 series PTZ cameras, both should be to hand during installation or commissioning and take precedence over this guide.

The VIP X is an ultra-compact network video server for one (VIP X1) or two (VIP X2) connected video sources. Its primary function is to encode video and control telemetry data for transmission over an IP network. With its encoding in MPEG-4 format, the VIP X is ideally suited for adapting analogue cameras for IP communication and remote access to digital video recorders and multiplexers.

Due to its compact size (about the same as a cigarette packet), it can easily be integrated into small housings without difficulty. The use of existing networks means that integration with CCTV systems or local networks can be achieved quickly and easily.

Two units for example a VIP X as the transmitter and another VIP X as the receiver can form a stand alone system for data transfer without a PC. Video images from a single transmitter can be simultaneously received on several receivers.

Bosch VIP X1/VIP X2 –

http://office.manualsonline.com/manuals/mfg/bosch/vip_x1vip_x2.html



Features

The VIP X1/X2 has the following features:-

- Video and data transmission over IP data networks
- Dual streaming function for the encoder for simultaneous coding with two individually definable profiles
- Multicast function for simultaneous picture transmission to multiple receivers
- One analogue BNC video input FBAS (PAL/NTSC) on the VIP X1, two analogue BNC video inputs FBAS (PAL/NTSC) on the VIP X2
- Video encoding using MPEG 4 standard
- Integrated ethernet interface (10/100 T-Base)
- Transparent Bi-directional data channel using serial interface RS232/RS485
- Remote control of all functions via TCP/IP
- Password protection to prevent unauthorised connection or configuration changes
- Four relay inputs for external sensors (such as door functions)
- Event-driven, automatic connection (e.g. switch on and alarms)
- Fast, convenient configuration using the integrated web server and a browser
- Firmware update through flash memory
- Convenient upload of configuration data



WARNING: Refer to the installation documentation for the device to be controlled and the VIP X installation manual. These contain important safety instructions and information about permitted uses.

CHAPTER 2 VIP X Connections



1 Video In 1



- | | |
|---|-------------------------------|
| 1 USB port | 5 LED Link |
| 2 Reset: Factory Default | 6 LED Traffic |
| 3 Alarm in, Relay out, Power, COM (RS232/422/485) | 7 10/100 Base-T Fast Ethernet |
| 4 LED Power | |



Front Panel

1. Video input Video In BNC Connector for external video sources (there are two of these connectors on the VIP X2)

Rear Panel

1. USB port for future expansion of functions e.g. USB Hard Drive
2. Reset Button to reset the unit to factory default settings
3. Terminal block for Alarm in, relay out, Power, COMMS (RS232/422/485)
4. Operating power LED
5. Network Link LED , lit when connected to a network (L)
6. Traffic LED – Lit when transmitting data over the network (T)
7. RJ45 Ethernet Jack for connecting 10/100 Base-T Fast Ethernet

Cameras

Depending on which VIP X model chosen, you can connect up to two (2) video sources that produce a standard PAL or NTSC signal.

Connect the camera/s using 75Ohm BNC cable to the BNC jack 1 or 2 respectively.

Data Interface

The bi-directional data interface is used to control devices connected to the VIP X, such as a PTZ camera with motorised lens.

The interface supports RS232, RS422 and RSD485 transmission standards. The serial interface is made up of four terminals of the ST500 jack.



WARNING: Refer to the installation documentation for the device to be controlled and the VIP X installation manual. These contain important safety instructions and information about permitted uses.

Network

Connect the VIP X to the network using standard Cat5e cable with RJ45 connectors.

Alarm Inputs

The VIP X has four alarm inputs on the on the orange terminal block. The alarm inputs are used to attach alarm devices such as PIR detectors, door contacts or other sensor types. With the appropriate configuration the alarm sensor can trigger an automatic connection between the VIP X and a remote location.

A voltage free contact can be used as an actuator, if possible use a bounce free contact system as the actuator.

Connect the lines to the appropriate terminals on the orange terminal block (IN1 to IN4) and check the connection is secure.

Relay Output

The VIP X has a relay output for switching external devices, such as lights or audible alarms. This relay output can be activated manually during an active connection with the VIP X. Moreover the alarm can be configured to activate audible alarms or other devices as a response to an alarm signal. The relay output is also located on the orange terminal block.



WARNING: The maximum rating of the relay contact is 30V and 2A

Connect the lines to the appropriate terminals (R) on the orange terminal block and check that the connection is secure.



Turning on/off

The VIP X includes a mains power supply with four primary adaptors and terminal block. The VIP X does not have a power switch; the unit is ready for operation as soon as the power is connected.



WARNING: To operate the VIP X use only the power supply unit supplied with the correct primary adaptor for your mains socket. Use suitable equipment when necessary to ensure the mains supply is clean and free from voltage surges, spikes or voltage drops.



WARNING: Connect VIP X only after everything else is connected.

Using the power supply unit cable connect the terminal block to the orange jack on the VIP X.

Ensure that the correct primary adapter is attached to the power supply unit and an appropriate mains socket is available.

Plug the power supply unit into a grounded mains socket. The unit is ready for operation as soon as the “operating status” LED stops flashing red during start up and is lit green.

If the network connection is in order, the green LED **L** is also lit. The flashing orange LED **T** indicates data traffic on the network.

Terminal Block Connections

The terminal block is used to connect external signal sources or alarm switches, as a relay output, a serial interface or as a power supply.

Options for using the serial interface include transparent data transfer, control of connected devices or operation of the unit with a terminal program. Depending on the configuration settings, the serial interface uses the RS232 or RS422/485 standards.

The pin assignments and functions are shown below:-

Pin Assignment

IN1	IN3	GND	R	CTS	RXD	+
●	●	●	●	●	●	●
●	●	●	●	●	●	●
IN2	IN4	GND	R	RTS	TXD	-



The pin assignment for the serial interface depends on the standard used, these are detailed below:-

Pin	RS232 Standard	RS422/485 Standard
IN1	Alarm Input 1	Alarm Input 1
IN2	Alarm Input 2	Alarm Input 2
IN3	Alarm Input 3	Alarm Input 3
IN4	Alarm Input 4	Alarm Input 4
GND	GND (ground)	GND (ground)
GND	GND (ground)	GND (ground)
R (Top)	Relay	Relay
R (Bottom)	Relay	Relay
CTS	CTS (clear to send)	RxD- (receive data minus)
RTS	RTS (ready to send)	TxD- (transmit minus)
RXD	RxD (receive data)	RxD+ (receive data plus)
TXD	TxD (transmit data)	TxD+ (receive data plus)
+	12 V (power supply)	12 V (power supply)
-	GND (ground)	GND (ground)

Connecting the MIC400 camera

The MIC400 camera is connected to the VIP X via twin shielded twisted pair cable for the telemetry signals and coaxial cable with a BNC connector for the video feed from the MIC400 power supply unit.

A typical installation with connections is shown alongside.

Pelco D/P or Bosch protocol should be loaded into the MIC400 camera.

Once connected, power the camera and the VIP X unit and you can now access your camera via the Ethernet connection using either a terminal program or the integrated web browser.

Configuring the MIC400 Camera

The VIP X1/X2 contains an integrated HTTP server which allows the unit to be configured over the network via a web browser.

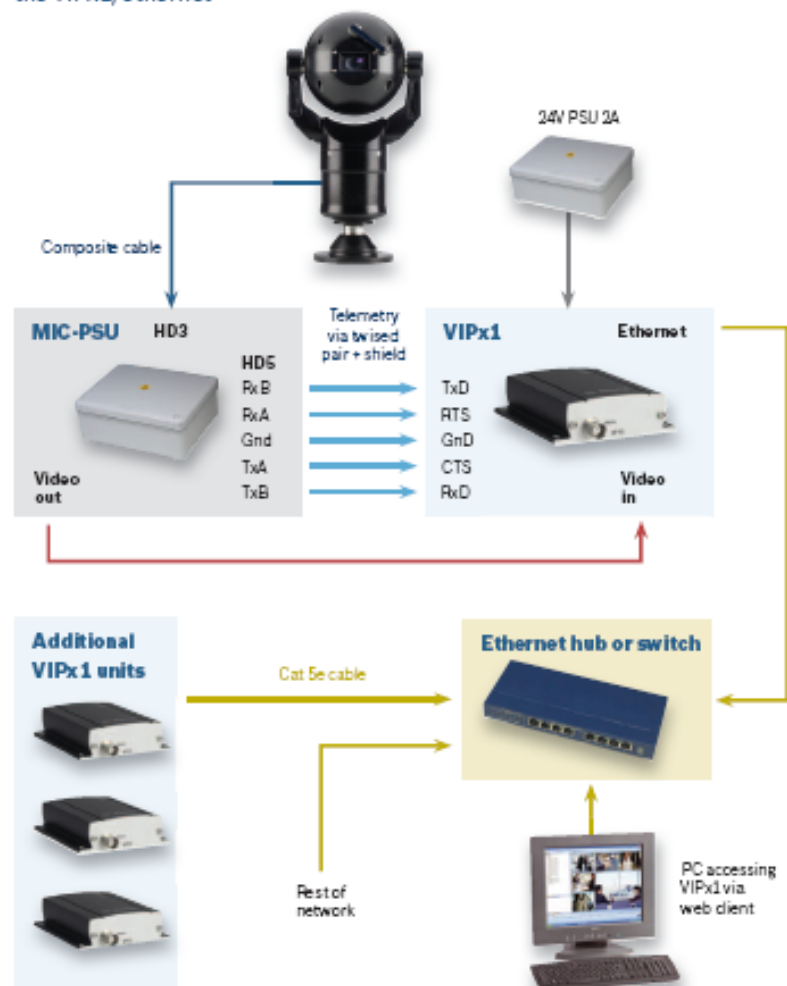
Please refer to the VIPX1/VIP X2 Installation and User guide for details on installation and operation of this software.

The user manual is for the VIP X1/ VIP X2 network video server is on the CD that comes with the VIP X unit or can be downloaded for the URL below:-

http://office.manualsonline.com/manuals/mfg/bosch/bosch_network_device_product_list.html

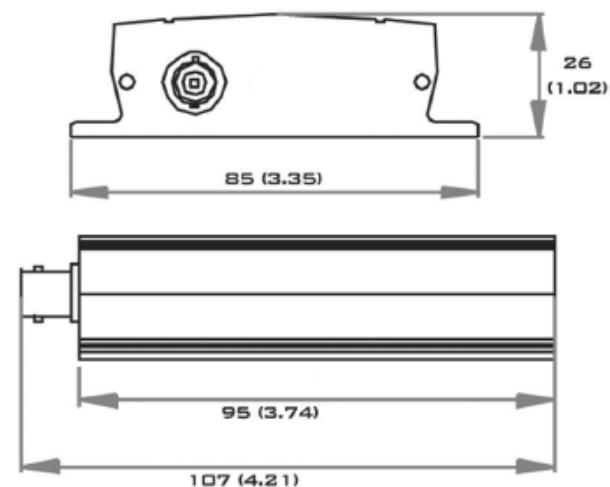


An example of a network using the MIC1-400 connected via the VIPx1/ethernet



CHAPTER 3 Technical Specifications

Environmental



Dimensions in mm (inches)

Weight	- Approx 0.17kg (.037lb)
Input Voltage	- 12-24VDC, spring clamp contact
Power Consumption	- Approx. 6VA
Power Supply	- VIPXPS111022 included
Operating Temp	- 0°C to – 50°C (32°F to -122°F) ambient



Humidity	- 20% to 80% atmospheric humidity (not cond.)
Complies with	- CE: IEC60950: UL 1950; AS/NZS 3548; EN55103-1, -2; EN50130-4; EN55022; EN55024; EN61000-3-2; EN61000-3-3; FCC 47 CFR Ch.1 Part 15

Electrical

Video Standards	- MPEG-4; JPEG
Video Data Rate	- 9.6 Kbps – 6 Mbps
Video Resolution	- 704 x 576/480 (4CIF/D1: 25/30 IPS) - 704 x 288/240 (2CIF: 25/30 IPS) - 464 x 576/480 (2/3 D1: 25/30 IPS) - 352 x 576/480 (Half D1: 25/30 IPS) - 352 x 288/240 (CIF:25/30 IPS) - 176 x 144/120 (QCIF: 25/30 IPS)
GOP Structure	- I, IP
Overall Delay	- MPEG-4: 120ms
Network Protocols	- RTP, Telnet, UDP, TCP, IP, HTTP, IGMPv2/v3, ICMP, ARP, SNMP
Software Update	- Flash ROM, remote programmable
Configuration	- Configuration Manager, web Browser

Interfaces

Video In	- 1 x analogue composite; NTSC/PAL; BNC connector 75 Ohm switchable, 0.7- 1.2 Vp-p
Alarm In	- 4x (non-isolated closure type), max. activation 10 ohm

Relay Out	- 1x, 30Vp-p, 2A
Connectors	- 14 position spring clamp connectors for alarm, relay and COM port
COM Port	- 1 x RS-232/422/485, spring clamp contacts
USB Port	- 1 x 2.0 external interface
Ethernet	- 10/100 Base-T, auto-sensing, half/full duplex, RJ-45
PoE Models	- VIPX1P, VIP X1AP
Power-Over-Ethernet	- 802.11af, class 2
Output power	- 2.5W max, spring clamp contacts
Audio Models	- VIP X1A, VIP X1AP
Audio Standard	- G.711; 300 Hz – 3.4 kHz
Audio Data Rate	- 80kBit/s
Audio Sampling Rate	- 8 kHz
Line In	- Single Channel via stereo jack 3.5mm, 9 kOhm typ. 5.5 Vpp max
Line Out	- Single Channel via stereo jack 3.5mm, 16 Ohm min. 3 Vpp max
Microphone In	- Combicon plug, 2kOhm typ, 2.8 Vpp max, -20dB, supply 2.3V typ.
Speaker Out	- Combicon plug, 4 Ohm min, 6Vpp max, power RMS 1W



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